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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,509	10/15/2003	Nick Andrew Van Stralen	RD26061-3	6725

7590

04/19/2005

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EXAMINER

TORRES, JOSEPH D

ART UNIT

PAPER NUMBER

2133

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/687,509

Applicant(s)

VAN STRALEN ET AL.

Examiner

Joseph D. Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.
2a) ☐ This action is FINAL. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
4a) Of the above claim(s) 2-28 is/are withdrawn from consideration.
5) ☒ Claim(s) 1 is/are allowed.
6) ☐ Claim(s) _____ is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 10/15/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 2-28 ARE directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 1 is directed to backward and forward state metric calculations for use MAP or Viterbi decoders for turbo decoding encoded data classified in 714/796 whereas claims 2-28 are directed to the specific components and calculations for determining probabilistic reliability values classified in 714/780. For example claim 2 recites, "at least one of said alpha and beta blocks for calculating at least one of said alpha and beta probability function values substantially simultaneously." Claim 13 recites, "each of said alpha probabilities corresponding to a single trellis level are computed in parallel." Claim 14 recites, "a circuit for computing four gamma probabilities at each trellis level for a rate half-component code." Claim 15 recites, "each of said beta probabilities corresponding to a trellis level are computed in parallel." Claim 16 recites, "a decoding algorithm that computes alpha probabilities and a single normalization value and applies said normalization value to all alpha probabilities at a trellis level in parallel." Claim 17 recites, "each of said sigma probabilities corresponding to a trellis level are computed in parallel." Claim 18 recites, "a decoding algorithm that computes alpha probabilities in a direction R and simultaneously computes beta probabilities in a direction L, wherein each of said probabilities corresponds to a single trellis level." Claim 21 recites, "at least one of said alpha or beta probabilities are computed according to an update rule

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that includes a normalization factor.” Claim 24 recites, “selection switches that select two gamma probabilities from a set of input gamma probabilities, wherein an output from said selection switches is combined with at least one of two alpha probabilities or two beta probabilities.” Claim 26 recites, “a log-domain addition using two parallel branches, wherein one of said branches performs a select-largest-value function and the second of said branches computes a correction value dependent on a difference of two values.”

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 2-28 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

This application contains claims 2-28 drawn to nonelected inventions. **A complete reply to this action must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.**

Note: non-elected claims (to any added invention(s)) will be held in abeyance in a withdrawn status, and will only be examined if filed in a divisional reissue application. If the reissue application containing only original unamended claims becomes allowable first (and no “error” under 35 U.S.C. 251 exists), further action in that reissue application will be suspended to await examination in the

divisional reissue application(s) containing the added claims. >Multiple suspensions (usually six-month periods) may be necessary.< The Office will not * >permit< claims >to issue< in a reissue application which >application< does not correct any error in the original patent. Once a divisional reissue application containing the added claims is examined and becomes allowable, **>the examiner will issue a requirement under 37 CFR 1.177(c) for applicant to merge the claims of the suspended first reissue application with the allowable claims of the divisional reissue application into a single application, by placing all of the claims in one of the applications and expressly abandoning the other. The Office action making this requirement will set a two-month period for compliance with the requirement. If applicant fails to timely respond to the Office action, or otherwise refuses to comply with the requirement made, then the divisional reissue application (claiming the invention which was non-elected in the now-suspended first reissue application) will be passed to issue alone, since the claims of the divisional reissue application, by themselves, do correct an error in the original patent. Prosecution will be reopened in the suspended first reissue application, and a rejection based on a lack of error under 35 U.S.C. 251 will then be made. This rejection may be made final, since applicant is on notice of the consequences of not complying with the merger requirement.

Allowable Subject Matter

2. Claim 1 is allowed.

See detailed actions for US Application 09/ 263566 now US 6304996 B1.

Conclusion

3. This application is in condition for allowance except for the following formal matters:

Claims 2-28 must be cancelled.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

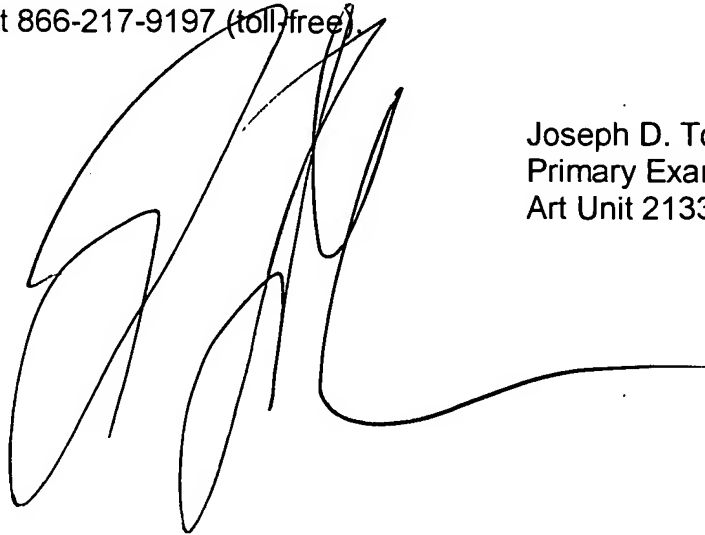
A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A large, stylized handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the end.

Joseph D. Torres, PhD
Primary Examiner
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